

CLAIMS

What is claimed is:

1. In a wireless multi-cell communication system including a radio network controller (RNC) in communication with a plurality of base stations, a method of providing high speed downlink packet access (HSDPA) services, the method comprising:

(a) the RNC sending a control signal to at least one of the base stations, the at least one base station having a plurality timeslots assigned thereto for the establishment of HSDPA channels, the control signal indicating a maximum allowed HSDPA transmit power for each of the timeslots; and

(b) the at least one base station sending a feedback signal to the RNC, the feedback signal indicating the results of measurements of the power of the transmitted HSDPA timeslots during a predetermined time period.

2. The method of claim 1 wherein the predetermined time period is at least 100 ms.

3. The method of claim 1 wherein the wireless multi-cell communication system is a time division duplex (TDD) system in which the RNC allocates a certain number of timeslots for the usage of HSDPA data channels (HS-DSCHs) to each cell.

4. The method of claim 1 wherein the maximum allowed HSDPA transmit power for one timeslot of one cell is different than the maximum allowed HSDPA transmit power for the same timeslot in a different cell.

5. A wireless multi-cell communication system for providing high speed downlink packet access (HSDPA) services, the system comprising:

(a) a radio network controller (RNC); and

(b) a plurality of base stations in communication with the RNC, wherein:

(i) the RNC sends a control signal to at least one of the base stations, the at least one base station having a plurality of timeslots assigned thereto for the establishment of HSDPA channels, the control signal indicating a maximum allowed HSDPA transmit power for each of the timeslots; and

(ii) the at least one base station sends a feedback signal to the RNC, the feedback signal indicating the results of measurements of the power of the transmitted HSDPA timeslots during a predetermined time period.

6. The system of claim 5 wherein the predetermined time period is at least 100 ms.

7. The system of claim 5 wherein the wireless multi-cell communication system is a time division duplex (TDD) system in which the RNC allocates a certain number of timeslots for the usage of HSDPA data channels (HS-DSCHs) to each cell.

8. The system of claim 5 wherein the maximum allowed HSDPA transmit power for one timeslot of one cell is different than the maximum allowed HSDPA transmit power for the same timeslot in a different cell.

9. In a wireless multi-cell communication system including a radio network controller (RNC) in communication with a plurality of base stations, a method of providing high speed downlink packet access (HSDPA) services, the method comprising:

(a) the RNC sending a control signal to at least one of the base stations, the at least one base station establishing a frequency division duplex (FDD) cell having a plurality of frames including respective sets of transmission timing interval (TTIs) assigned thereto for establishing HSDPA channels, the control signal indicating a maximum allowed HSDPA transmit power for each of the TTIs; and

(b) the at least one base station sending a feedback signal to the RNC, the feedback signal indicating the results of measurements of the power of the transmitted HSDPA timeslots during a predetermined time period.

10. The method of claim 9 wherein different sets of TTIs in respective ones of the frames are allocated different maximum allowed HSDPA transmit power settings.

11. The method of claim 9 wherein the predetermined time period is at least 100 ms.

12. The method of claim 9 wherein the RNC is configured to disable particular ones of the TTIs.

13. The method of claim 9 wherein the RNC is configured to disable particular TTI sets included in the frames.

14. A wireless multi-cell communication system for providing high speed downlink packet access (HSDPA) services, the system comprising:

(a) a radio network controller (RNC); and

(b) a plurality of base stations in communication with the RNC, wherein:

(i) the RNC sends a control signal to at least one of the base stations, the at least one base station establishing a frequency division duplex (FDD) cell having a plurality of frames including respective sets of transmission timing interval (TTIs) assigned thereto for establishing HSDPA channels, the control signal indicating a maximum allowed HSDPA transmit power for each of the TTIs; and

(ii) the at least one base station sends a feedback signal to the RNC, the feedback signal indicating the results of measurements of the power of the transmitted HSDPA timeslots during a predetermined time period.

15. The system of claim 14 wherein different sets of TTIs in respective ones of the frames are allocated different maximum allowed HSDPA transmit power settings.

16. The system of claim 14 wherein the predetermined time period is at least 100 ms.

17. The system of claim 14 wherein the RNC is configured to disable particular ones of the TTIs.

18. The system of claim 14 wherein the RNC is configured to disable particular TTI sets included in the frames.